CLINICAL MEDICINE

GEORGE B. LAKE, Jr.
Publisher

RALPH L. GORRELL, M.D.
Acting Editor

EDITORIAL STAFF
Frank Thomas Woodbury, B.A., M.D.
Lee Douglas van Antwerp, A.B., M.D., F.A.C.P.
W. A. N. Dorland, A.M., M.D., F.A.C.S.
Harold Swanberg, B.Sc., M.D., F.A.C.P.
Gentz Perry, M.S., M.D., F.A.C.R.
H. J. Achard, M.D.

VOLUME 50 OCTOBER, 1943 NUMBER 10

Principles of Management of Nasal Deformities

By MORTON I. BERSON, M.D.,* *New York, N. Y.*

This is not the usual plastic surgeon's article, liberally besprinkled with "before and after" photographs. Dr. Berson discusses briefly the care of nose fractures, a common problem in general and surgical practice, and the information needed before corrective nasal surgery can be advised.

NASAL DEFORMITIES may be divided generally into two groups; acquired and congenital. The most common acquired, traumatic deformity of the external nose is the lateral deviation, the nose being deflected by the blow so that it is pushed to the opposite side; or the bony and cartilagenous framework may be sufficiently fractured, twisted or buckled and the bridge of the nose depressed, to give a saddle deformity.

Many recent fractures of the nasal bones are undiagnosed and neglected because of a large amount of swelling and ecchymosis resulting from facial trauma.

Fractures of the Nose

In recent fractures where there is marked lateral displacement or a depressed bridge of the nose, the fracture can be easily recognized by careful palpation and manipulation. In all doubtful cases of nasal fracture, roentgenograms should be made. Reduction of these lateral fractures may be accomplished by manual manipulation with thumb pressure. If the nasal bones are depressed, they may be elevated by the use of a blunt instrument used in the nares and the bones immobilized in position by a headgear attachment (see Fig. 1). If the bones are impacted, a special padded nasal forceps, with one blade in the nares and the other against the skin, can be used to manipulate the fragments. After the bones have been molded into position, they are stabilized by use of dental modelling, compound softened

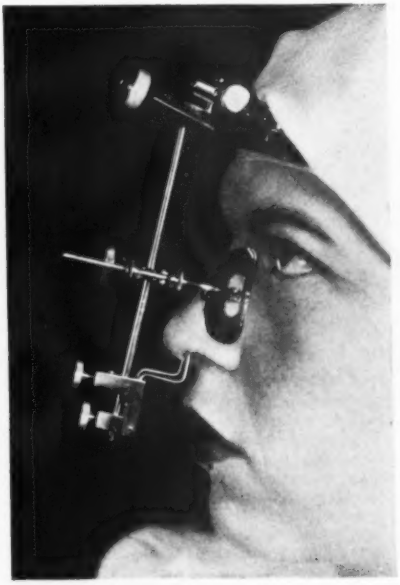


Fig. 1. Adjustable head instrument used to immobilize nasal bones laterally and to maintain traction and elevation of depressed fractures.

*Director of Plastic and Reconstructive Surgery, The Downtown Hospital and Pan-American Clinic.

and moulded over the nose (see Fig. 2). Intranasal packing of sulfathiazole impregnated gauze is inserted and the stent is held in place by adhesive strips applied horizontally and diagonally.

Previous to reduction of fractures, the nasal fossa should be carefully cleansed and all blood clots and loose foreign bodies irrigated out with warm boric

Fig. 2. Modeling compound splint molded to nose after reduction of fracture.

acid or hydrogen peroxide solution. In children and apprehensive adults, general anesthesia is preferable. Pentothal sodium is an excellent general anesthetic for this work. However, for others, monocaine hydrochloride solution may be injected extranasally around the fractured side. *It is important that the reduction of all these fractures be accomplished as soon as possible as the nasal bones exhibit bony union within a few days.*

Permanent Nasal Deformities

Nasal deformities due to healed fractures must be treated in essentially the same manner as congenital deformities, inasmuch as there is complete union of the nasal bones and they cannot be manipulated into their original positions.

In correction of a saddle nose of long standing (see Fig. 3), a mask of the patient is made pre-operatively. The size and shape of the transplant required to restore the esthetic height of the nose is measured on this mask. Many foreign substances such as ivory, gold, silver and animal bone have been buried beneath the skin in building up the nasal

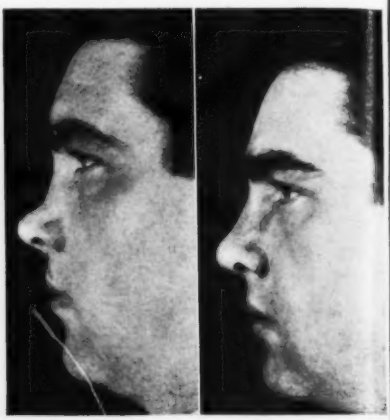


Fig. 3. Saddle nose due to old fracture. The bridge was narrowed, septum reconstructed and modeled costal cartilage implanted in one-stage operation.

bridge. While these alloplastic materials may give immediate esthetic satisfaction, they are incapable of becoming incorporated as an integral part of the tissues. Subsequent inflammations and ulcerations follow and eventually result in expulsion of the implant. Pickled cartilage grafts have been used but experimental evidence shows that they undergo a slow, gradual invasion by fibrous tissue and partial absorption and hence are not as satisfactory a filling substance as fresh, autogenous costal cartilage. Fresh rib cartilage retains its contour, is readily shaped and becomes a part of the living organism. To correct the defect, a section of rib cartilage of the size required is excised under local anesthesia. This cartilage is shaped to duplicate the pre-operative model and is inserted into a prepared pocket through an intercartilaginous incision beneath the periosteum of the dorsum of the nose. Should there be a loss of tip support, it can be restored by using an additional small piece of cartilage as a columella strut.

In these cases, the patient is hospitalized five days, to allow for healing of the chest wound. Post-operative dressings are removed after seven to ten days and the patient is discharged after two weeks.

In correction of a twisted nasal bridge

due to old fracture, it is necessary to excise a triangular section of bone from the broad, concave side; thus permitting the shifting of the narrow side of the median line.

Rhinophyma

In cases of rhinophyma, a less common type of acquired deformity, very often the vast hypertrophy of the tissues completely overhangs and blocks the nostrils, causing great discomfort in addition to grotesque appearance. Fortunately, while correcting or reshaping the deformed nose, the internal deformities producing obstructed breathing are also repaired.

Congenital Deformities

The most common types of congenital deformity are hump nose, broad bridge and broad nostrils, long nose, negroid type of nose or any combination of these deformities. In these cases, after examination of the patient, photographs, measurements and masks are taken to determine the ideal shape of the new nose. These are important elements in nasal reconstructive surgery for the corrected nose must conform to and harmonize with the rest of the features[1].

To obtain these esthetic results, the author has devised a Rhinometer (see Fig. 4) which is useful in the diagnosis of nasal deformities and is valuable in the progressive checking of results during nasal operations.

A mask is made of the patient's face and the nose on this mask is reshaped according to the determined measurements (see Fig. 5). This gives the surgeon a working model both preoperatively and during the operation. Preoperatively, exact proportions in all dimensions can be more accurately reached, and during the operation, the mask can be placed in a similar position to the patient and constantly referred to for details of shape and proportion. Local anesthesia infiltrated into the soft tissues temporarily distorts the shape of the nose and therefore makes these fixed models necessary for guidance. Many patients will bring diagrams of photographs of some movie star and request that type of nose for themselves. By constructing the chosen nose on the patient's mask, it can be readily demonstrated that that nose is out of proportion to the rest of the patient's features.

Surgical Technic

The operation is performed in the hospital under the strictest aseptic conditions. The patient receives a sedative prior to the operation to alleviate possible fear or nervousness. The patient's face and the entire intransal field of the operation are thoroughly washed with

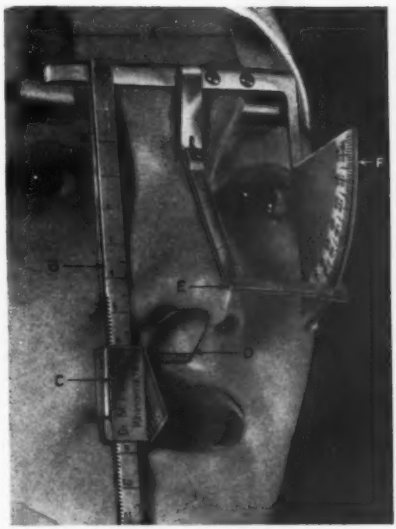


Fig. 4. Author's rhinometer.
(a) *Two Rests* which are fitted under the superior orbital crests of each eye. These points are fixed and from them accurate measurements can be made.
(b) *A Vertical Column with a Numerical Scale* designed to carry a sliding platform.
(c) *A Cross-Member Carriage*, designed to slide the platform to various levels along the column. Then, according to the graduated scale, is measured the difference between actual length (from nasion to apex) and the desired length. Normal length of nose is one-third of facial length.
(d) *The Platform* fits under the columella of the nose and is tilted to the desired esthetic angle. Normal tilt angle is 95 degrees.
(e) *The Lever on the Calibrated Arc* (F) is adjusted to the normal profile angle and the amount of excess height to be removed is determined. Normal profile angle is 30 degrees.

green soap, then swabbed with metaphen and alcohol. Monocaine hydrochloride in a 1½% solution with epinephrin 1:100,000 is infiltrated into the soft tissues of the nose intranasally. This produces complete anesthesia for the entire length of operative time and controls bleeding. The length of time required for the operation to completely reconstruct the nose averages from forty to sixty minutes. The entire operation is performed intranasally, thereby leaving no external scars.

Hospitalization for the usual case is only twenty-four hours. The nasal bony bridge is correctly positioned at the time of the operation and held by a hard rubber stent mold inserted under the post-operative dressing, thereby eliminating the use of a "brace" in post-operative treatments. The original post-

Fig. 5

A. Patient before operation with corrected nose on mask.

B. Nose corrected to conform to working model, compared with original mask.

operative dressing is kept intact for five days, during which time most of the edema subsides. After seven days, the final dressing is removed and the patient is able to resume normal activities, as the general edema and discoloration have almost completely disappeared. Subsequent post-operative treatments consist of cleansing the nasal mucosa. The patient is discharged between seven and ten days after operation.

Nasal plastic operations to correct congenital deformities should not be performed unless the patient has reached the age of seventeen when the nasal structures normally cease to develop. The reconstructed nose will then retain its shape permanently and will not return to its original form. The excess skin formerly required to cover a larger structure will contract to fit the reduced size of the nasal framework.

Summary

Each step in a nasal plastic operation is equally important to the final result since failure in any one procedure may produce an artificial appearing "plastic" nose or even a deformed nose[2]. Under proper operative technic and esthetic planning, the main objectives of corrective rhinoplasty are accomplished:

1. The ideal nose for the individual face is attained.
2. The normal functions of breathing and sense of smell are not disturbed.
3. Impaired breathing is corrected.
4. The psychological reaction is nearly always a new outlook on life.

REFERENCES

1. Berson, Morton I.: Construction of the Ideal Nose with Aid of Masks and Measurements. Med. Rec., 149:3, Feb. 1, 1939.

2. Berson, Morton I.: Prevention of Deformities in Corrective Rhinoplasty. The Laryngoscope, 53:4, April, 1943.

133 East 58th Street.

Questions Concerning Anemia

Answered by WILLIAM P. MURPHY, M.D., *Boston, Massachusetts*

1. *What new methods of treating anemia have recently been introduced?*

Answer: I know of no newer methods. The trend toward smaller dosage of ferrous sulfate as compared with certain other forms of iron is probably entirely unjustified on the basis of clinical evidence, and this has tended to increase the number of poorly treated patients.

2. *How may the general practitioner, especially a remotely located one, make accurate diagnosis of anemia and other hematologic conditions?*

Answer: This question is a pertinent one and difficult to answer briefly. The tests which are most important are very easily and simply done, as described in my book, "Anemia in Practice." I believe that each physician nowadays should have his own microscope, should be capable of doing the routine blood examinations accurately and should be able to examine the patient's smears. No pathologist should be willing or able to make a diagnosis of the majority of the blood dyscrasias from an examination of the smear alone. With considerable clinical and laboratory information he may, however, be able to do so. If the physician is not able to study the patient, it would perhaps be best to persuade him to go away for a complete study.

3. *What is the status of the treatment of anemia today?*

Answer: I feel that it is in a state of considerable confusion with very indefinite knowledge of the value of liver and its derivatives and of iron in the form of the various salts in the several types of anemia. Too many preparations of questionable value are being prescribed so that the expense of treatment of anemia is altogether too great and the results often unsatisfactory because of the insufficient quantities of either anti-pernicious anemia substance or iron.

311 Beacon Street.

The Treatment of Intestinal Protozoa and Helminths*, Part I

E. C. FAUST, Ph.D.; J. S. D'ANTONI, M.D.; W. G. SAWITZ, M.D.

Department of Tropical Medicine,
Tulane Medical School, New Orleans, La.

Techniques of Diagnosis

Material. Fecal specimens are collected in clean glass jars. These specimens are obtained from: (A) Stools normally passed; (B) stools passed after saline purgation; (C) saline enema specimens; (D) feces or blood and mucus removed through proctoscope.

Technics of Examination. All specimens should be examined by both the direct fecal film and concentration technics as soon as possible after being passed. In liquid or semi-liquid stools, trophozoites are likely to be the only stage of Protozoa present and these are usually recovered only in the direct fecal film. In formed feces, cysts of Protozoa are the most common stage found, and these are more likely to be found in concentrates.

The Direct Fecal Film. A representative fleck of feces or mucus is removed with an applicator, or from a liquid stool, with a pipette. The material is thoroughly mixed in a drop of physiologic salt solution on a clean microscope slide and the film spread over an area about one by two inches. The unstained half of the film is covered with a coverglass; the other half is similarly covered after a drop of D'Antoni's iodine stain has been mixed with it.

To supplement this technic hematoxylin-stained permanent films may be prepared.

The National Institute of Health Swab Technic (NIH swab). Since eggs of the pinworm or seatworm (*Enterobius vermicularis, Oxyuris*) are not commonly deposited in feces but rather on the perianal and perineal skin, the most efficient technic for diagnosis is the swabbing or scraping of the perianal folds. The NIH swab, a glass rod tipped with cellophane held in place with a rubber band, is employed to swab the perianal area. The cellophane with the adhering material is removed from the rod, placed into a few drops of water on a slide, flattened, covered with a coverglass and examined with low power of the microscope.

Treatment

AMEBIASIS

Chiniofon

Indications: This is the drug of choice for all types of amebiasis.

Toxicity: Non-toxic in therapeutic doses.

Efficacy: Approximately 90 per cent.

Preparation: Keratin-coated or uncoated pills each containing 4 grains (0.25 gm.). Marketed under the trade names Anayodin (Winthrop) and Yatren. Chemically it is sodium iodoxyquinolinsulphonic acid, containing 26 to 28 per cent iodine.

Dosage: Adults: 16 grains (4 tablets) three times daily for seven days; children: 1 grain per 10 pounds of weight three times daily.

Method of Administration: Following meals 16 grains (4 tablets) are given by mouth for a period of seven days. If no *E. histolytica* is found in the stool over a period up to six months, no further medication is necessary. If the stools remain positive, the treatment is repeated following a rest period of at least seven days. The drug may be administered without interfering with the patient's daily routine, and no precautions are necessary regarding diet or exercise except in those cases of amebiasis manifesting symptoms. Hospitalization is unnecessary except in severe cases.

Untoward Symptoms: In about 40 per cent of the individuals treated with this drug a diarrhea appears on the second or third day, which lasts for one or two days and can be controlled by 2 drams (8 cc.) Tr. opii camphorata or Kaomagma (Wyeth) 1 to 2 tablespoonfuls following each defecation.

Contraindications: Essentially none.

Diodoquin

Indications: Although the amebicidal potency of this drug has not been

The Bulletin of the Tulane Medical Faculty, Feb., 1943. By Permission of Dr. Faust.

thoroughly investigated because it is a relatively new product, its high iodine content and low toxicity warrant its use when two full courses of chiniofon have failed.

Toxicity: Non-toxic in therapeutic doses.

Efficacy: Approximately 85 to 95 per cent.

Preparation: Tablets (Searle) containing 3.2 grains (0.21 gm.). Chemically, it is an iodine compound in which the sodium sulfonate radical of chiniofon is replaced with a second iodine atom, thus forming a double iodine compound (5-7-diiodo-8-hydroxy-quinoline), containing 63.9 per cent iodine.

Dosage: Adults: 22.5 to 30 grains (7-10 tablets) daily for a period of two to three weeks; children: 1 tablet per 15 pounds of body weight daily.

Method of Administration: The tablets are given following meals for a period of twenty days. The tablets may be chewed, an advantage in the treatment of children. If *E. histolytica* is still present, the course is repeated after a rest period of seven to ten days with the same or increased dosage.

Untoward Symptoms: None.

Contraindications: Essentially none.

Carbarsone

Indications: If two courses of chiniofon and one or two courses of diodoquin have failed, this is the next drug of choice.

Toxicity: Mildly toxic.

Efficacy: Approximately 90 per cent.

Preparation: Gelatin capsules each containing 4 grains (0.25 gm.). Chemically, it is 4-carbaminophenylarsonic acid containing 28.85 per cent arsenic.

Dosage: Adults: 4 grains (1 capsule) twice daily for ten days; children: 1 grain per 20 pounds of body weight daily.

Method of Administration: Following the morning and evening meals, a 4-grain capsule is given by mouth for ten days. If *E. histolytica* is still present, the course may be repeated after a ten-day rest period.

Untoward Symptoms: If toxic symptoms (especially undue intestinal bleeding) occur, medication should be stopped

Contraindications: Liver or kidney disease.

Vioform

Indications: When chiniofon, diodoquin, and carbarsone have failed.

Toxicity: More toxic than chiniofon, less toxic than carbarsone.

Efficacy: Approximately 80 per cent.

Preparation: Tablets containing 4 grains (0.25 gm.) Chemically, it is iodochlorhydroxyquinoline, containing between 37.5 and 41.5 per cent iodine.

Dosage: Adults: 4 grains (1 tablet) three times a day for ten days; twice this dose is recommended in severe infections; children: ½ grain per 15 pounds of body weight three times a day.

Method of Administration: One tablet is given by mouth after meals three times a day for ten days. The course may be repeated following a rest period of seven days.

Untoward Symptoms: Essentially none.

Contraindications: Essentially none.

Emetine

Indications: (A) For symptomatic relief in cases of severe abdominal distress in amebiasis; (B) for amebic tumor ("ameboma") of the bowel; (C) for amebic liver abscess; (D) for amebic hepatitis.

Toxicity: In therapeutic doses this drug will produce nausea and vomiting when taken by mouth. Extremely toxic if given in large doses or over a long period of time. Produces *myocardial damage.*

Efficacy: For *A* symptoms are relieved in about 85 per cent of the cases; curative in only 33 per cent of cases. For *B, C* and *D* relatively efficient. The only drug available.

Preparation: Ampules containing 1 grain of emetine hydrochloride in 1 cc. of solution.

Dosage: Adults: 1 grain *subcutaneously*, not to exceed 12 grains within a period of forty days; children: over eight years of age, the dosage must not exceed ½ grain daily.

Method of Administration: The patient is hospitalized and 1 grain of the drug is given subcutaneously on successive days for a period of twelve days. This dosage may be supplemented by ½ grain by mouth. No further injections are given for a period of one month, after which the course can be repeated.

Untoward Symptoms: Toxic symptoms, such as sudden cardiac failure, myocarditis, wrist, ankle or toe drop, muscular pains and weakness, may appear during injections. Medication must then be stopped.

Contraindications: Myocardial, kidney, and liver damage. Children under eight years of age.

BALANTIDIASIS

On account of the paucity of cases of this disease reported within recent years it is difficult to evaluate any of the more modern chemotherapeutics. The drugs

recommended are *listed in the order of least toxicity, not efficiency.*

Carbarsone

This drug should be tried. See "Amebiasis". Smaller doses over longer periods of time might be suggested.

Stovarsol (Acetarsone)

Indications: When two rounds of carbarsone have failed, this is the second drug of choice.

Toxicity: Very toxic in therapeutic doses.

Efficacy: Probably most efficient of all drugs now available.

Preparation: Tablets containing 4 grains (0.25 gm.). Chemically, it is a pentavalent organic arsenical compound (acetyl-aminohydroxyphenylarsonic acid) containing 28 per cent arsenic.

Dosage: Adults: 13 tablets, each containing 4 grains, are given over a period of five days; children: not recommended.

Method of Administration: One tablet is given twice daily following meals for two days. This is increased to three tablets daily for the following three days. If the stools remain positive, the drug may be repeated after seven days.

Untoward Symptoms: Five cases of death have been reported. If symptoms of arsenical myelitis, peripheral neuritis, arsenical dermatitis or blindness occur, stop medication.

Contraindications: Severe diseases of the heart, arteries, kidneys, liver, the optic nerve, acute febrile diseases and hemorrhage, as after abortion.

GIARDIASIS

Up to 1937 the treatment of giardiasis was very unsatisfactory. Methylene blue, gentian violet, thymol, salol, carbon tetrachloride, betanapthol, chiniofon, guaiacol, calomel, sodium sulphate, magnesium sulphate, and emetine hydrochloride have been tried without much success. In April, 1937, Brumpt reported the results of his experimental study on the effect of acridine dyes upon mice and rats infected with *Giardia lamblia.* Shortly thereafter Galli-Valerio tried the acridine derivative atabrine on five cases with a reported 100 per cent cure rate.

Atabrine

Indications: Clinical symptoms, as catarrhal duodenitis, possibly produced by the presence of *Giardia lamblia.*

Toxicity: Relatively non-toxic in therapeutic doses. The drug is slowly excreted, traces being found in body fluids up to ninety days. Because of this cumulative effect a course of treatment should not be repeated within thirty days.

Efficacy: 90 per cent efficient in 417 cases reported.

Preparation: Tablets (Winthrop) containing 1½ grains (0.1 gm.) or ¾ grain (0.05 gm.). Chemically, it is 2-methoxy-6 chlor-9-a-diethylamino-d-pentylaminoacridine.

Dosage: Adults: 1 tablet of 1½ grains (0.1 gm.) three times daily for five days. Children: one to four years, 1 tablet of ¾ grain (0.05 gm.) twice daily for five days; four to eight years, 1 tablet of 1½ grains (0.1 gm.) twice daily for five days; over eight years, adult dose.

Method of Administration: The tablets are given following meals with increased water intake during the day. The tablets may be crushed and may be suspended in honey, syrup, etc. *Atabrine treatment should not be repeated within 30 days.*

Untoward Symptoms: Yellowish discoloration of the skin in 5-10 per cent of cases (which, however, is not to be confused with jaundice and is not a contraindication). Psychosis.

Contraindications: Any past or present history of psychosis.

(To be continued next month)

The Treatment of Impetigo

Appearance	Treatment	Cause
Thick, "golden" honey colored crusts	Ammoniated mercury ointment 2 to 5 percent or sulfanilamide 4 percent in aquaphor	Streptococci
Thin, "varnished" crusts; bullae (blisters)	Gentian violet, 2 percent aqueous very effective; or ultraviolet light and 1/1000 mercuric chloride wet dressings	Staphylococci

—T. S. SAUNDERS, M.D. in *Northw. Med.*, May, 1943

Simple Resuscitation of the Newborn

By RALPH L. GORRELL, M.D., *Clarion, Iowa*

THE FIVE most important minutes in a baby's life, are those first five minutes of life. If the physician sees to it that the infant is breathing regularly and that the respiratory passages are open, he has been worthy of his fee for that alone. This method has proved effective:

Fig. 1: The injection of alpha-lobeline into the umbilical vein. The cord is cleaned with sterile soap and water, and the needle inserted into the blue, twisting vein. The injection is made slowly, after aspiration on the syringe reveals blood, indicating that the needle is inside the vein. A finger, or clamp, prevents the medication from being carried away from the baby. If respiratory movements of the chest do not begin in 30 seconds, "milk" the cord down toward the navel to express the medication into the infant's circulation.

The appearance of a small hematoma at the site of injection is treated by compression with sterile gauze for several minutes. If still progressing, the cord is clamped and cut between the site of injection and the navel.

(1) Soft gauze squares are used to mop mucous out of the mouth and from the nose.

(2) A soft, infant size catheter is gently inserted into the mouth and throat of the infant; while suction is being made on the open end which is held in the physician's mouth. The tip of the catheter is guided back into the throat [See Fig. 3 (a)] and immediately above the larynx (the epiglottis is easily felt as a firm, little rim) with a finger of the opposite hand. After a few drops of thick mucous have been sucked into the catheter, it is removed and the material blown out onto sterile gauze or a towel, and the catheter re-inserted. After once sucking distasteful secretions into the mouth, the physician usually gauges the capacity of the catheter, properly.

(3) *After* the throat and nose are open, Lobelin-Bischoff* is given by injection into an umbilical vein (see Fig. 1), just as one would give any intravenous injection. Alpha-lobeline, of which this is one brand, has been shown experimentally to increase or initiate respiratory efforts. The physician who sees an asphyxiated baby make attempts to breathe within a few seconds after such an injection, and finds that respiration is *regularly* initiated by this medication, finds it difficult to believe the statements of some authorities (who apparently have never used it consistently) that it is of little value.

The contents of a 1 cc. ampoule containing 1/20 gr. (Q.003 Gm.), the infant size dose, is that employed. I have never had to use a second dose.

(4) Oxygen is given through a rubber tube and a small mask, which is held over the nose and mouth. A simple, effective mask can be made (as suggested by S. P. Leinbaugh, M.D., Belmond, Ia.) by cutting off the tip of a large, rubber, baby nipple. (See Fig. 2.) The tube from the oxygen tank is attached, with adhesive tape if necessary. Small oxygen tanks, such as are used for basal

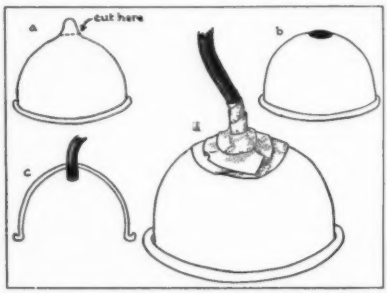


Fig. 2: Simple oxygen mask made by cutting off the tip of a Hygea type nipple and attaching a rubber tube to an oxygen tank.

metabolism machines, weigh only five pounds and can be easily transported to the home. The use of oxygen for a few minutes results in a markedly pink infant.

We usually suspend the baby by its feet for a moment, to have the help of gravity in draining out the secretions in the nose and throat, and then lay it on its side while aspirating the secretions from the throat. We do not immediately wrap it up in warm blankets, as

*Bischoff Company, Ivoryton, Connecticut.

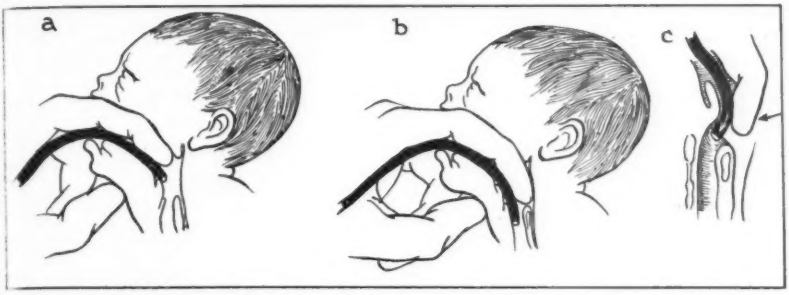


Fig. 3. (a) Our method of aspirating from the throat. (b) DeLee's method of introducing the laryngeal catheter. (c) Technic of bending the top of the open-end catheter forward into the larynx.

heat is relaxing and stimulation is desired. A catheter, French size number 8 to 12, is used; if it is not available, a larger size may be used carefully so as not to scrape the back of the infant's throat.

Clinical Results

Five years of home deliveries followed by five years of hospital deliveries have not resulted in any failures to initiate successful respiration, overcome asphyxia and permit *continued* normal breathing. Two hundred and ten infants were delivered in his time. One twin baby, weighing 3½ pounds, required intermittent aspiration for 24 hours. A seven months infant needed moisture (humidity of 40) for 3 days, in order to breathe properly. In the earlier days, when oxygen was not available, several infants received enough oxygen by subcutaneous injections of air to give them a normal color (a syringe and sterile needle are used; air is drawn into the syringe, and then injected beneath the skin or into the muscle of the thigh or buttock; too much cannot be injected—the amount is only limited by the ability of the tissues to stretch).

After the throat is cleared of mucous, the small catheter may be gently inserted into each nostril and suction again applied.

Beck[1] has several interesting comments to make: "Obstructing material should be used by suction preceding *any* method of artificial respiration since the attempt to force air into a child with obstructed respiratory passages is as unreasonable as attempting to fill a bottle without removing the cork . . . Studies of blood taken from the umbilical cord at birth indicate an oxygen shortage. Normal infants following a normal delivery have 10 percent oxygen content in the blood; asphyxiated infants have 1.3 percent."

For those who have small, adept fingers, DeLee's method[2] of introducing an open-end catheter into the larynx and directly sucking out the obstructing secretions is ideal. (See Fig. 3, b and c.) DeLee writes, "Lobeline hydrochloride is a valuable addition to our remedies . . .

"Since the circulation in bad cases is almost in abeyance, the drug is best administered via the umbilical vein. The cord is clamped 8 inches from the fetal navel, 2nd 1/20 gr. of lobeline injected and the cord milked so that the medicine enters the fetal circulation. The result is sometimes dramatic. Its effect lasts only a few moments."

Summary

The asphyxiated infant needs (1) clearing of the respiratory passages, (2) oxygen, (3) moderate warmth and, if respiration does not start, (4) the injection of alpha-lobeline into the umbilical vein.

BIBLIOGRAPHY

1 Beck, Alfred: Obstetrical Practice. Baltimore: The Williams and Wilkins Co. 1942. P. 835.

2 DeLee, J. B.: Principles and Practice of Obstetrics. Philadelphia: W. B. Saunders Co. 1938. P. 908.

Freedom and Growth

Freedom is the right to grow. Freedom is not in itself an important thing; freedom means principally the right of the individual to perform action. It is not the right but the action which is performed that is significant.

—MANLY P. HALL

Reduced Temperatures (Cold) in Surgery and Therapy

By FREDERICK M. ALLEN, M.D., *New York, N. Y.*

THIS brief summary will not attempt to tell anything new, but will only sketch a few principal features for those who may be unacquainted with the subject and who may consult the larger publications for any detailed points of interest.

Various uses of cold can be traced back in medical literature for centuries, but they have been of minor or haphazard character. The first scientifically founded system of crymotherapy was that of Temple Fay (cf. Smith[1]), who made fundamental studies of life processes at various temperatures, and two chief therapeutic contributions: first, the introduction of applicators at about 40° F. in various bodily regions or organs, including the brain, for long periods; second, the artificial hibernation in which the temperature of the entire body may be reduced to 90° F. or lower for as long as several days. The application of these methods was not limited to cancer. Their value for controlling pain, infection and shock is recently becoming more generally appreciated.

My own use of reduced temperature was independent and differed from that of Fay in origin, method and purpose. It originated from a study of diabetic gangrene. It includes a tourniquet or some equivalent stoppage of circulation; *consequently*, it is limited and local in extent but greater in degree than is ever possible with the blood flowing. The purposes for which this method has served to date include the following:

(1) First and preeminently, it has been used by Dr. Lyman Weeks Crossman[2] and his associates for anesthesia in amputations of limbs on account of diabetic or arteriosclerotic gangrene, embolism, and soon Crossman describes the technique, the prevention of pain, shock, infection, sloughing and various post-operative accidents, and the consequent striking reduction of operative mortality especially in senile or debilitated patients. It is emphasized that such limbs are *not frozen* but reduced to temperatures slightly above freezing.

(2) When necessary, Crossman and others have also used the method for pre-operative control of infection, and incidentally of pain. Generally this refers to a patient who enters a hospital in an excessively weak, toxic or febrile state, or sometimes one who temporarily refuses an urgently needed operation. Ordinarily, the affected leg is thoroughly surrounded with crushed ice or bare ice-bags. Hyperpyrexia is thus often controlled over-night. The comfortable patient may be built up with food and other treatment for several days, and McElvenny sometimes continues the treatment even for several weeks before operation. The extreme arteriosclerosis in such limbs usually serves as a sufficient tourniquet, in the sense that circulation is so scanty as to permit effective through-and-through chilling. Recently, Haley[3], in the Baltimore City Hospital, has introduced an interesting modification, by placing a tight tourniquet below the knee, together with refrigeration. Toxic absorption is thus completely stopped, and after two or more days a higher tourniquet and refrigeration are applied for amputation above the knee.

(3) **Embolism** can be managed on this same principle. Theoretically, the ideal treatment for a major embolism should be immediate application of a tourniquet proximal to the site of the embolus, and refrigeration to a few inches above this point. This thorough chilling of the entire affected part of the limb checks thrombosis and tissue devitalization, also the extension of the embolus upward is prevented. It may be expected that the favorable period for embolectomy will thus be extended far beyond the four-hour limit which is traditional. There is as yet no record of any case actually treated thus by refrigeration at the ideal early stage. At a later stage, refrigeration can still be used as the anesthetic for either embolectomy or amputation. Or, when the time is too late for embolectomy but the level of demarcation is still uncertain, gangrene can be delayed and pain controlled by packing the limb in ice or ice-bags, the embolus itself serving as a sufficient tourniquet. Both limb and patient have been kept safe by this means for periods up to several weeks, until conditions were satisfactory for operation.

(4) **Trauma**, particularly of the limbs, constitutes an important field of usefulness for cold. McElvenny[4] published the first case record under this category. Mock has evidently had the largest experience, and other writers are beginning to report similar results. Pain, infection and tissue devitalization are arrested. In

some instances, the trauma of limbs has been only a minor part of extensive injuries which threatened life. In such cases refrigeration alone has sufficed to control the condition in the limbs, while general measures have been carried out to save life. Two results are thus accomplished: the limbs no longer contribute to aggravate the constitutional condition; the damaged limb tissues are saved from infection and devitalization. Most important is the clinical proof that this refrigeration of lacerated and fractured limbs (without a tourniquet) can be continued for days or weeks without harm. Then, when the constitutional condition warrants, the traumatized limbs can be brought to operation in fully as good condition as immediately after the injury.

(5) **Shock** is obviously an outstanding feature of the traumatic states just mentioned. There is now agreement without dispute that cold prevents shock. Refrigeration anesthesia is the only kind of anesthesia which positively prevents operative shock. Traumatic shock can likewise be prevented by local cold. The only question that has been raised is as to the value of reduced temperature for treating existing shock. The need for further experimental and clinical investigation of this point is being rather rapidly supplied, and already two statements seen to be warranted: (a) A slight reduction of the rectal temperature in severe shock is probably to be regarded as physiological or beneficial, but the most definite fact is that *the former practice of overheating with artificial warmth or heavy blankets* is wrong and injurious. Most of the existing military and first-aid manuals need radical revision on this point. (b) Thorough refrigeration of a local part from which shock originates is beneficial in removing an aggravating factor and retarding the entire process so that time is gained for the necessary constitutional treatment. My own experiments to this effect seem to be confirmed by the clinical observations on trauma.

(6) *Hemorrhage* is a factor to be considered in limb wounds, especially in connection with the use of a tourniquet. The suspension of animation in tissues by cold and the corresponding suspension of need for blood is illustrated by my experiments with tourniquets on animals' legs for 54 hours, and the similar experiments of Brooks and Duncan with rats' tails for 96 hours, without death of tissue and without even reaching the maximum time limit of tolerance. While it is not certain that refrigeration can be as thorough and efficient in the much thicker human limbs, there is some clinical evidence that a tourniquet can be tolerated for as long as 48 hours without necrosis. Such periods are far longer than required for control of hemorrhage under any ordinary conditions. In contrast with the usual military or first-aid rule that a tourniquet must be loosened every thirty minutes is the well proved fact that a tourniquet with refrigeration can be kept in place for six or eight hours without risk. The only possible exception may be found when tissues are already so badly damaged or devitalized that they furnish starting points for thrombosis in spite of the reduced temperature. The mere absence of circulation for the times mentioned, at temperatures between 33° and 44° F., is not harmful to tissues.

For all the above reasons, refrigeration is believed to promise important advantages in the treatment, transportation and operation of limb casualties in war.

Local Anesthesia

(7) Local anesthesia is conveniently obtained with cold in less serious conditions than the major operations and emergencies heretofore mentioned. The City Hospital staff have found that the simplest way of opening a felon or performing any other operation on a finger or toe is to tie a rubber band around the base and insert in ice-water for 20 to 30 minutes. Ice without a tourniquet produces an efficient superficial anesthesia which H. E. Mock, Jr.[5] recommends for skin grafts. Various uses in plastic surgery may be predicted.

(8) Frost-bite, "trench foot" and other lesions due to exposure to cold are now treated at reduced temperatures, preferably in a cold-air chamber, as described by Bigelow[6].

(9) Burns are the most frequent injuries, especially in war time, which are superficial enough to be treated effectively with cold without a tourniquet. Our small experience to date is reported in a preliminary publication[7]. The advantages of refrigeration consist of relief of pain and shock, arrest of infection and preservation of tissue vitality. It does not interfere with customary treatments but can be used in combination with any of them. Therefore, our first plan was to apply very light dressings of vaseline gauze sprinkled with sulfadiazine powder, with ice-bags outside. Lately it has seemed preferable to sprinkle burns of the extremities with sulfadiazine and place them in a cold-air chamber without dressings. For burns of the general body surface, refrigerating sheets of various sizes, main-

tained at a constant temperature by special electrical apparatus, are lighter and more convenient than ice-bags.

1031 Fifth Avenue.

References

1. Smith, L.W.: The use of cold in medicine. *Ann. Int. Med.*, 17: 618-626, 1942.

2. Crossman, L. W., and others: Refrigeration anesthesia. *Anesth. and Analg., Sept.-Oct., 1942.* Also *Arch. Surg.*, 44: 139-156, 1942. Also *J. Internat. Coll. Surg.*, 5: 171-173, 1942.

3. Haley, E. R.: Arteriosclerotic gangrene: a report on refrigeration prior to amputation. *Arch. Surg.*, 46: 518-524, 1941.

4. McElvenny, R. T.: The effect of cooling traumatzeid and potentially infected limbs. *Surg., Gyn. & Obstet.*, 73:263-264, 1941.

5. Mock, H. E., Jr.: Refrigeration anesthesia in skin grafting. *Bull. Am. Coll. Surg.*, 28: 56, 1943.

6. Bigelow, W. G.: The modern conception and treatment of frost-bite. *Canad. Med. Assn. J.*, 47: 529-534, 1942.

7. Allen, F.M., Crossman, L.W., and Safford, F. K.: Reduced temperature treatment for burns and frost-bite. *New York State J. of Med.* (to be published).

Bronchial Asthma: Clinical Considerations

By LEO H. CRIEP, M.D., *Pittsburgh, Pa.*

THE clinical picture of bronchial asthma is too well known to warrant repetition. The following material will deal with some clinical phases which need emphasis and which can best be illustrated by short clinical reports.

Pulmonary Tuberculosis and Bronchial Asthma

Male, aged 55, complains of having had asthma for 6 years. The asthmatic attacks are typical in onset and are characterized by wheezy respiration, shortness of breath and productive cough. There is a family history of allergy. He had a careful and complete allergic survey two years ago but obtained no relief from allergic treatment.

Physical examination: Not conclusive; a few moist rales were audible at the right apex. *X-ray of lungs*: Definite tuberculous process in right upper lobe.

Every asthmatic patient must have a complete examination.

Bronchial Asthma and Heart Disease

Male, aged 58, who gives a history of paroxysmal attacks of choking accompanied by coughing and wheezing, occuring usually at night, for the past year. No allied allergic signs or symptoms and no family history allergy was obtained.

Physical examination shows evidence of hypertension and enlargement of the heart with electrocardiographic evidence of heart disease. There are loud sonorous expiratory rales of both bases.

Nocturnal dyspnea, associated with wheezing in patients over fifty, should always make one suspicious of heart disease. The most frequent causes of cardiac asthma are hypertension, luetic aortitis, and coronary disease.

Bronchial Asthma and Allergic Cough

Patricia Ann D., age 4. This child had a persistent paroxysmal, dry cough for the first two years after birth. Her mother states that it was thought at first, that the child had frequent chest colds for which no possible cause could be found. Later on, the cough became more severe and was associated with wheezing. At times it would last for two to three days and would be accompanied by high fever, so that the diagnosis of pneumonia would be made. She has been cured of six such attacks.

The child has never been able to take cow's milk and presented serious feeding problems in infancy. Many milk substitutes were tried in order to avoid allergic manifestations. She is also markedly sensitive to dust. Her attacks of asthma are especially severe in the early summer when she is taken to the lake where her parents have a cottage. Investigation revealed her to be sensitive to milk, dust, fungi, and a few other substances. Suitable changes in the child's environment and diet, together with treatment with extracts of molds, brought about an excellent therapeutic result.

Bronchial asthma is frequently preceded in infants and children by an unexplainable persistent cough which occurs in paroxysms. In the absence of any demonstrable cause, such as an enlarged thymus or mediastinal glands, it is well to think of the possibility of its being allergic. Because the paroxysms are associated with some bronchitis and fever, the diagnosis of pneumonia is often made, but the attack lasts only

one or two days and *is relieved by ephedrine and epinephrine.*

The possibility of sensitivity to molds and fungi, as well as to pollen, should be kept in mind if the history indicates seasonal asthma. In the case reported above, it was quite suggestive. While closed during the winter, summer cottages become dusty and mildewed due to increased humidity and lack of ventilation.

The child presented serious allergic feeding problems. The resources of the pediatrician are taxed in such cases, for he must be familiar with all the ingredients of the numerous proprietary baby foods. In the case of breast-fed babies, he must keep in mind the possibility of the child being sensitive to some food ingested by the mother and passed into mother's milk in quantities sufficient to produce symptoms in the baby.

Hay Fever and Pollen Asthma

Stanley G., age 11. This boy has had seasonal asthma and hay fever since the age of three. The attacks begin in March and last right through the spring and summer to the first frost. Investigation shows him to be sensitive to the pollen of trees, grasses, and ragweed. Pollen treatments given annually for the past five years have brought about the disappearance of the asthmatic condition.

It should be pointed out that *children can tolerate the same dosage of pollen as adults*; that no child is too young to take pollen treatments; that the annual treatment for hay fever is most desirable; that, in many instances, children who have taken annual treatment for a few years can get along well without treatment.

What is even more important, the treatment of hay fever in children is an effective prophylactic measure against the development of bronchial asthma. Many children with untreated hay fever begin to develop asthmatic symptoms towards the end of the pollen season, and if this early warning goes unheeded, the child will continue to have asthma for increasing intervals after the season is over. Before very long, the patient has bronchial asthma which occurs throughout the year.

The boy mentioned in the above case report experienced occasional itchiness of the nose which developed in him certain mannerisms so characteristic in some allergic children. "Sniffing," nose-rubbing, and nose-wrinkling are some of these mannerisms.

Drug Allergy and Asthma

D. A., age 12. This patient is a boy who has had an allergic rhinitis and hay fever for the past five years. He states that after taking half an aspirin tablet for a headache, about three years ago, he was suddenly seized with a severe attack of asthma and generalized urticaria, for the relief of which two injections of epinephrine were administered. One year later he was given some "Cold" tablets with the same result. He has refused to take any tablet medicine since then.

The manifestations of drug allergy may be slight or severe. They may include a mild dermatitis and slight fever (acquired sensitivity), or in a naturally allergic child (atopy) they may be evidenced by the occurence of severe nasal or asthmatic symptoms and may even prove fatal. It is for this reason that caution must be exercised in the administration of drugs to allergic children. Parents should be warned not to give the allergic child any home remedies without the physician's specific permission. Similarly, the child suffering with an allergic skin condition may be made worse by the very ointment which is given to him for his relief. This in many instances is due to an acquired specific sensitivity to the ingredients of the ointment. Such allergy should be ruled out by patch-testing before proceeding with the use of the suspected ointment.

Chronic Asthmatic Bronchitis and Bronchiectasis

The patient is a fifty-two year old male who gives a history of having had paroxysmal attacks of asthma for the past fifteen years. During the past two or three years, the cough has become productive of a thick yellowish purulent material. The patient expectorates about one or two cups of sputum daily. There is also a definite history of nasal involvement accompanied by post nasal drip. There is a family history of allergy. There is an associated history of eczema.

Obviously, this patient is an allergic patient who had developed bronchial asthma early in life. This condition was neglected and finally became complicated by a chronic bronchitis and bronchiectasis.

Allergy to exogenous factors is not of much importance in this type of case. The infection in the paranasal sinuses and in the bronchial tree are contributory factors.

The proper management of such a patient involves the elimination of such

allergic factors as allergic investigation may reveal to be present. Also, the treatment of the nasal infection and of the bronchitis and bronchiectasis. The administration of expectorants, the administration of respiratory vaccine, and change of climate.

Complications of Asthma

Chest Deformities

Joseph C, age 6. This boy has a definite allergic background. He has had flexor eczema and bronchial asthma since the age of two. This instance is presented to illustrate pulmonary emphysema and chest deformities as one of the complications of untreated bronchial asthma. The clavicles, instead of sloping down towards the sternum, assume a horizontal position. In many instances, as may be seen in this case, there is an anterior bulging of the sternum giving rise to a "pigeon breast" deformity.

Facial Deformities

Nathan Y. age 12. Diagnosis: allergic rhinitis and hay fever.

Nasal and respiratory allergies in early life frequently lead to bony changes in the base of the skull, to a narrowing of the arch of the palate (the so-called Gothic arch), to a depression of the bony prominence of the cheek bones, so that they assume a flat appearance. These changes in turn lead to a crowding of the incisor teeth, with the result that many of these children need corrective measures including dental braces.

Chronic Bronchitis and Bronchiectasis

Jeanne F., age 10. This patient has had paroxysmal attacks of choking, coughing, and wheezing, accompanied by profuse expectoration and an elevation of temperature, for several years. Roentgen-ray examination of the chest using iodized oil shows no evidence of tuberculosis. There is definite thickening of the bronchi and bronchioles.

Chronic suppurative bronchitis and bronchiectasis may follow long-standing untreated bronchial asthma in children. It is not an uncommon complication and is responsible for the constant elevation of temperature in these patients. It is an example of a situation which could have been handled rather easily in the beginning. However, after infection sets in, successful treatment is much more difficult.

Comment

The reports given above help to emphasize certain clinical facts in connection with bronchial asthma. Every asthmatic patient is entitled to a careful and complete physical examination, for "not all that wheezes is asthma."

Furthermore, it is extremely important that every asthmatic patient, especially those who are under thirty-five and especially children are given the benefit of an allergic survey. The time has passed when we can look upon allergic examinations as "experimental." Too much is known about allergy to warrant such a view. Too often, postponement of proper allergic study and management is equivalent to neglect; this is especially true in children. Children do not "outgrow" their allergy. The allergic child, if untreated, continues to suffer from his allergy. This frequently leads to complications and secondary changes which make difficult the solution of a problem which was comparatively simple in the beginning.

In this way, untreated nasal allergies become complicated by the appearance of nasal polyps, the occurrence of nasal infection, and the development of facial and dental deformities. Bronchial asthma develops into emphysema, chest deformities, and bronchiectasis. Skin allergies lead to secondary changes such as keratosis and lichenification. The continuation of allergic symptoms over a long period of time affects the child's growth, health, and personality. He loses weight, becomes irritable, fretful, and sleepless. He misses school, cannot play with other children, and frequently finds it difficult to learn a trade which will help him obtain and hold some gainful occupation.

Proper diagnosis involves recognition of the allergic state and determination of the etiologic factors. This etiologic diagnosis is based largely on clinical study and less on skin testing. For this reason, any pediatrician, who is sufficiently interested and has the time, can give the average allergic child needed attention. In more complicated instances, special allergic care may be necessary.

Adequate treatment is predicated primarily on the early, accurate, and complete etiologic diagnosis. Little or nothing, therapeutically worth while, should be expected from some single procedure such as tonsillectomy, ionization, iodized oil insufflation, and the like. Much, however, can be done for these children through patient, painstaking care. Such care is obtained only through proper teamwork between pediatrician and allergist—teamwork which to be effective must extend both through the period of diagnosis as well as treatment. The improvement to follow will earn for the attending physician the parents' everlasting gratitude.

1004 May Building

An Enzyme Mixture for Dissolving Slough

By S. T. GLASSER, M.D., F.A.C.S., *New York, N. Y.*

AN EFFECTIVE enzyme mixture which would be efficacious for dissolving slough has long been sought after. Interest in this field has been revived because of the apparent need of an agent of this type during wartimes. In the past, enzymes have not been successful in the treatment of slough for the following reasons: Practically all enzymes lose their potency within a comparatively short time in aqueous solutions; in the presence of air, oxidation further decreases potency. These factors have been overcome in great measure by making a non-aqueous mixture of the enzyme.

The mixture which we have successfully employed consists of papaine, triethanolamine, oleic and stearic acids, and mineral oil. Papaine has proved itself as a satisfactory proteolytic agent which does not attack healthy tissue. Triethanolamine has slight proteolytic qualities and in addition lowers the surface tension which allows for better penetration of the mixture. The oleic and stearic acids were found most efficient as anhydrous solvents and in the proper proportions avoid sedimentation.

The mixture is employed as a wet dressing protected by an impervious covering (oil silk, cellophane, or similar material). A small amount of water is added to the mixture only at the time of application and thoroughly stirred until of a cream-like consistency. Our report* on 58 cases illustrated the efficacy of the enzyme mixture as a proteolytic agent and in addition served as a deodorizer and epithelium-stimulating preparation.

1049 Park Avenue

Additional Note: In answer to your question concerning the availability of my enzyme mixture commercially, please note that this preparation is made in our hospital pharmacy. Following further research with this problem, it is possible that one of the larger pharmaceutical companies will put this mixture on the market.—S.T.G. (From the Department of Surgery, Dr. Louis Rene Kaufman, Director, New York Medical College, Flower and Fifth Ave., Hospitals.)

* New Treatment for Sloughing Wounds: S. THOMAS GLASSER—*The American Journal of Surgery*, 50:320-322, November, 1940.

Persistently Painful Wrist: Scaphoid Fracture

A wrist that is persistently painful following injury should be carefully x-rayed for fracture of the scaphoid bone. A good roentgen ray picture may be obtained by placing the two wrists of the patient in adduction and the x-ray tube in a position midway between the two hands, somewhat anterior to the wrist joint and just back of the knuckles.—*South. Med. & Surg.*, Feb. 1943.

[Ferguson in "Surgery of the Ambulatory Patient" (J. B. Lippincott Co., 1942) writes, "Swelling and acute tenderness are present in the anatomical snuff box, just distal to the styloid of the radius. Pressing or tapping on the thumb in the direction of the wrist causes definite pain at the site of the fracture . . . *Actual sprain at the wrist is an uncommon lesion* . . . If the fracture is not visible on the x-ray at time of injury, it may be demonstrated on new films taken at the end of four weeks which show decalcification at the fracture line."]

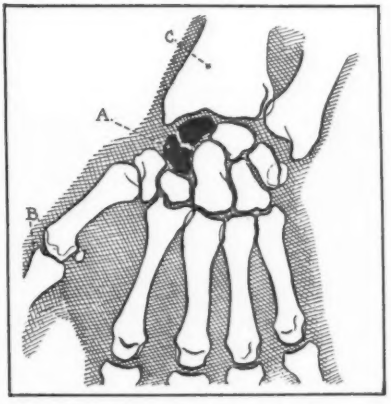


Fig. 1. Fracture of the scaphoid at the wrist. The scaphoid bone is shown in black, (A) with the fracture line traversing it. (B) is the thumb and (C) the radius. This is a sketch made from an x-ray film.

CLAUDE BERNARD

Editorial

Claude Bernard

Founder of Experimental Medicine

WHEN some new and epoch-making theory is advanced or line of work undertaken, the thoughtless say, "How simple! It is a wonder that this was not seen years ago." But the man of keen perception realizes that the roof cannot be put upon a building until its framework has been constructed, and that many important pieces of knowledge are always awaiting some discovery which will bring them to light. Modern endocrinology, which now takes such a leading place in medical progress, might have been delayed for a century without the penetrating researches of Claude Bernard and his stimulating influence upon his pupil, Brown-Séquard.

Bernard was born in the village of Saint Julien, near Ville-franche, in France, July 12, 1813, and grew up among the vineyards of his father, who was a wine-maker of that region. He was a promising lad, but the family finances were inadequate to give him advanced schooling, and so he became an apothecary's apprentice at Lyons.

Having a romantic soul and a vivid imagination, young Claude turned to writing and brought forth a vaudeville comedy which was produced with some success. He then turned out a five-act tragedy and took it to Paris to find a producer, but was advised by the wise Girardin, to study medicine.

Bernard's early career as a medical student was not highly successful, for the spirit within him could not bow the knee to "recognized authorities" and he *wanted to know why*. But when he came in contact with Magendie, he met a man great enough to recognize greatness in another, and his path was made clear before him.

With Bernard's work, the history of experimental ("modern scientific") medicine begins. He expressed his attitude toward scientific investigation thus:

"Put off your imagination as you take off your overcoat, when you enter the laboratory; but put it on again, as you do your overcoat, when you leave the laboratory."

Dumas said of him, "He is not a great physiologist; he is physiology itself."

It was he who, about 1848, discovered the glycogenic function of the liver, and, realizing that this was something entirely new in physiology, coined the term, "internal secretion" and laid the foundation for the spectacular work of Brown-Séquard, which brought the new science of endocrinology to birth.

In the minds of many, this widely heralded discovery has thrown some of his other, and perhaps equally important, work into the background; but we must not forget that it was Bernard who first recognized the importance and the triple function of the pancreatic juice; the fact that puncture of the fourth cerebral ventricle, in dogs, produces temporary diabetes; the structure and activities of the vasomotor mechanism; the nature of carbon monoxide poisoning; and a number of other matters of basic importance.

But it is less his actual discoveries, in detail, upon which the fame of Bernard rests, than his superb presentation, in practice and precept, of the *scientific method itself*. Of his "Introduction to the Study of Experimental Medicine" Pasteur said, "Nothing so complete, nothing so profound and so luminous, has ever been written on the subject." His youthful literary experiences gave a vivacity, brilliance and facility to his writings which will make them fascinating reading for all time. His courses of lectures at the Sorbonne and the Collège de France, where he succeeded his teacher, Magendie, as professor of physiology, in 1855, have exerted an immense influence on medical science in general.

This tall, imposing, distinguished man, who gave his life to science, sacrificed his domestic happiness upon the same altar, for his wife and daughters (he had no son but that spiritual son, his

famous pupil) had no sympathy with his researches and looked upon him as merely a heartless vivisector, feeling that he should devote his genius to the development of a lucrative practice. So they left him to live and work alone; and it is said that one of his daughters actually hated him.

But the honors that came to him, in his lifetime, must have offered some compensation. Besides his professorship, he was admitted to the Academie Francaise in 1868 and, through the influence of Napoleon III, who was fascinated with his personality, was made a senator in 1869, holding these positions for a number of years before his death, in 1878, at what we now consider the rather early age of sixty-five.

A statue of him was erected on the steps of the Collège de France in 1886, but a nobler monument is found in the words of Pasteur:

"I seek in vain for a weak point in M. Bernard. His personal distinction, his gentle kindliness attract at first sight. He has no pedantry, but an antique simplicity, a perfectly natural and unaffected manner, while his conversation is deep and full of ideas."

✦

If anyone is glad you are here, you have not lived in vain.—GEORGE F. HOFFMAN.

✦

"I'm Only a . . ."

THE list of men who have overcome severe handicaps is practically endless. John Bunyan was thrown into a prison cell and, while there, wrote some of the finest literature of all time. Abraham Lincoln, born in poverty, suffered many business failures yet rose to the heights as a clear thinking, grimly determined President. Disraeli fought all his life against race prejudice and rose to be a worthy Prime Minister of England. Steinmetz was stabbed with rheumatic pains for years and couldn't sleep a night without an opiate, yet he was without a peer in the world of science.

If a man is determined to get along in this world of ours, he usually does. Necessity may or may not be the mother of invention, but there's no question but that *determination is the father of success.*" — *Illinois Dental Journal*, March 1943.

The man who says, "I am only a general practitioner, without extensive laboratory facilities and without a large practice; I must content myself with "country type of practice," is stating *excuses*, not facts.

If he is interested in obtaining laboratory confirmation of his diagnoses, there are many pathologists who carry out examinations on specimens sent in by mail (tissue examinations of both large and small organs and skin tumors, agglutination tests for the various febrile diseases, blood chemistry analyses, bacteriologic cultures and smears). The State Departments of Health will perform many examinations; find out what they are and how they may be obtained; no charge is made for many of these examinations.

If he is interested in having a roentgenologist interpret his films, there are a number of competent men who will do so for a small fee. In this way, the patient obtains radiologic consultation without leaving his home or the physician's care. The physician learns more about x-ray interpretation, in a continuous postgraduate course in his own office.

As a further extension of this service, there is no reason why the internist should not be able to give advice as to diagnostic possibilities in an individual case after reading a report from the well trained general practitioner concerning the highlights of the history and physical examination. In all such discussions of advice by mail, it is assumed that such patients are "office patients," who do not require personal attention by the specialist.

Strangely enough, where such methods of obtaining advice are followed, there has been, not a decrease, but an increase in the number of patients referred for consultation. As the general clinician becomes aware of possibilities in the special fields, he tends to refer patients before they are unmistakably and desperately in need of care.

✦

The Way to Honor

The shortest and surest way to live with honor in the world, is to be, in reality, what we would appear to be; and if we observe we shall find that all human virtues increase and strengthen themselves by the practice and experience of them.—SOCRATES.

CLINICAL NOTES and ABSTRACTS

Microfilm copies of any of the published papers here abstracted, up to 25 pages, may be obtained for 25 cents from Microfilm Service, Army Medical Library, Washington, D.C.

Present Status of Gynecological Organotherapy

Gynecologic therapy is not the simple plus or minus affair which it almost seems to be with certain other endocrine disorders, such as those of the thyroid. Deficiency of one of the ovarian hormones may be associated with excess of the other, with similar imbalances in the pituitary, and with complex, and not yet understood, interlocking relations between these two glands and between them and other endocrine organs, such as the adrenal cortex, the thyroid and certain so-called sex centers in the hypothalamic area of the brain. Only as our knowledge of these mechanisms is slowly developed may we expect, even more slowly, to interpret and treat intelligently many of the functional disorders encountered in gynecologic practice.

The introduction of the androgenic (male sex) hormones into gynecologic practice has been an interesting development of recent years. Already we know that they do not, as was once conjectured, play a role antithetic to that of the female sex hormones. One of the hot trails in endocrine studies of the present day is the attempt to unravel the nature of the relationship between these androgenic hormones, progesterone and certain adrenal cortical principles.

Amenorrhea and Sterility

Amenorrhea is exceedingly common and of real importance, not because of any directly harmful effect of the amenorrhea, but because of the psychological repercussions in many patients, and, even more, because it is often associated with sterility.

We need not elaborate upon the matter of etiologic classification of cases of amenorrhea, important as it is to type them in so far as possible into such groups as the pituitary, thyroid and ovarian varieties, according to the endocrine gland primarily involved. In all these types, varying degrees of adiposity are most often associated, though here are numerous exceptions. *Reduction of weight* by dietary restriction often appears to be a very salutary measure, insofar as the endocrinopathy is concerned, and I have seen not a few cases of secondary amenorrhea in which this measure alone has resulted in re-establishment of menstruation. Thyroid therapy, even in women with no clinical or laboratory evidence of hypothyroidism, appears by common consent to be helpful, though no one can explain the mechanism. Our results with ovarian and gonadotropic therapy are flatly disappointing. In the occasional successful case, it is difficult to eliminate the possibility of spontaneous readjustment of the endocrine mechanism, which undoubtedly occurs in a proportion of the cases. The obvious shortcomings of direct ovarian therapy are the fact that it is entirely substitutional, that it does not in any way stimulate ovarian activity, and that it does not bring about ovulation.

Primary Dysmenorrhea

Organotherapy is called for in only a small fraction of the cases. Progesterone and testosterone are frequently, but not by any means always, of great value; the former used premenstrually and the latter throughout the cycle. The risk of hirsutism and other unpleasant, though usually temporary side-effects of testosterone, is practically eliminated, if the dosage is not above 150 or 200 milligrams monthly, and if the treatment

is witheld from patients with a tendency to pigmentation or an already existing hypertrichosis.

A curious, and, as yet, not satisfactorily explained feature of primary dysmenorrhea, is that it occurs only in women with ovulating cycles, while anovulatory cycles, dominated only by the contraction-promoting estrogen are, paradoxically, not associated with pain. While various hypotheses have been suggested, no satisfactory explanation for this observation has yet been established. When it is, there is reason to hope that our treatment will be more intelligent and more generally successful.—E. NOVAK, M.D., in *South Med. J.*, Feb. 9, 1943.

✦

Ureteral Stone

Diagnosis of Ureteral Stone

Pain is present in 90 per cent of ureteral stone cases. The character of the pain is generally typical for stone, but it does not always radiate downward along the course of the ureter to the internal or external genitalia nor upward into the renal area. Stones occur chiefly in *middle age.* A sudden onset of severe abdominal pain requiring morphine for relief should at once suggest either urinary or biliary stone colic. Blood in the urine may be the only symptom of which the patient complains. Stone is one of the five common causes for blood in the urine but, in most patients, is followed by pain. Nausea and vomiting occur with renal and ureteral stone. One must never fail to ask the patient whether sand, gravel, or stone has been previously passed. Backache is present in 37 per cent of the cases. Frequency of urination is present in 42 per cent and burning in 30 per cent. Pus is found in the urine in one-third of all cases. (See Table 1)

TABLE I

Symptoms of Ureteral Stones	No. Patients	Per Cent
Pain	468	93.6
Hematuria	171	34.2
Nausea and vomiting	231	46.2
Frequency	211	42
Pyuria	180	36
Backache	186	37.2
Burning	152	30.4
Chills and fever	88	17.6
Passage of stones	71	14.2

The Examination

In a case of suspected stone, one should never be satisfied with the results of a single examination; especially, if it is negative (which occurs not at all infrequently when the stone produces a temporary block on the affected side); hence the importance of repeated examinations cannot be overemphasized. Examination of a number of specimens pertaining to the same patient may yield only negative results, when unexpectedly the next examination will show many fresh red blood cells, pus cells, or both. The roentgen-ray examination which begins with a plain film, or set of films, that includes the entire urinary tract is a necessary step in diagnosis. In some patients in whom the roentgenogram failed to show the stone shadow, the cystoscopic examination disclosed the stone in the ureteral orifice.

Treatment

The treatment of stone in the ureter may be watchful waiting, instrumental manipulation, or operative treatment. Many patients pass their stones, without the use of instruments, by the simple expedient of drinking large quantities of fluids, with or without the administration of diuretic drugs. The statement of a patient that attacks of renal colic were followed by the passage of stones, should not go unheeded and justifies a period of "watchful waiting." I have seen patients in whom no movement of a stone occurred for weeks or months without any untoward symptoms to be followed by the passing of the stone without medical aid, just when an operation was thought necessary.

Instrumental manipulation: Simple dilatations and injections of sterile oil into the ureteral catheter are safer but slower than stone extractors. —H. L. KRETSCHMER, M.D., in *S. G. O.*, June, 1942.

✦

Old Person's Heart

Drugs are not of supreme importance in the management of the heart that is growing old. In the older person who develops pneumonia or who has an upper respiratory tract infection, which may develop into pneumonia, it is an excellent idea to start digitalis promptly.

The older person slows down and minimizes his physical activities; he does not drive himself and his way of living becomes calmer. In this way, he avoids straining his heart. Unfortunately, he does not go far enough in his self restraint. He *must* rest after meals, as the coronary circulation is increased at that time. More coronary accidents occur shortly after eating than at any other

time of the day. Eight hours rest at night is ample, as the dynamics of the circulation when a patient is in the supine position, over a long period of time, are altered unfavorably. It is preferable to take a nap after meals or in the middle of the day.

Rest must be both physical and mental. Emotional excitement, straining at stool and sexual intercourse should be avoided. Short trips, a few holes of golf or a little fishing should take the place of longer, more wearing vacations or recreations.

Retirement from business is bad unless a man has an avocation which can supplant his vocation. We are all familiar with the man who stops work, only to degenerate rapidly.—J. H. MUSSER, M.D., in *Texas S. J. M.*, April 1943.

✦

Fetal Asphyxia

If the fetal heartbeats during labor remain persistently below 100 per minute, impending or real fetal distress is present. Temporary slowing may be due to pressure, cord prolapse, or trauma. If oxygen is given to the mother, there may be an immediate return of the fetal heart rate to the normal (120 to 150). No elaborate equipment is necessary, the minimum being a tank of oxygen, a reducing valve, and a rubber tube. A face mask is helpful. If the heart rate does not become normal in five minutes, the oxygen may be discontinued and a gentle delivery performed.—C. J. LUND, M.D., in *West. J. Surg., Ob. & Gyn.*, Nov., 1942.

Home Deliveries

The instruments needed for a delivery, whether home or hospital, are these: Catheter, obstetric forceps, scissors, 2 artery forceps, 2 vaginal retractors, 2 ring forceps, 2 Allis forceps, 3 needles, 1 thumb forceps with teeth and a needle holder. At the residence, they are left in the dishpan in which they were boiled, and placed on a chair beside the doctor as he sits at the bedside during the delivery.

The patient had been told to take an enema when labor began and is shaved after the doctor and nurse arrive. The bed is lifted from the floor by putting two bricks under each leg of the bed, the legs resting in caster cups to prevent slipping. The bed is prepared by putting an oilcloth over the sheet covering the mattress. A layer of six newspapers covered with a bath towel lies in such a way as to coincide with the length of the bed, and crosswise there is another layer of eight newspapers also covered with a towel, arranged so that one-fourth of their length hangs over the slop jar at the side of the bed (all are pinned together).

The patient is turned across the bed when she is nearly ready for delivery. The assistants sit on the bed, one on each side of the patient, and support the patient's legs, while the nurse, husband or neighbor who is giving the ether, sits on the far side of the bed.

The anesthetist, two assistants and physician wear caps and masks, and

Carbon Monoxide Poisoning

Percentage of CO in Air	Effects
0.02	Possibly headache, mild frontal in 2 to 3 hours.
0.04	Headache, frontal, and nausea after 1 to 2 hours, occipital after 2½ to 3½ hours.
0.08	Headache, dizziness and nausea in ¾ hour; collapse and possibly unconsciousness in 2 hours.
0.16	Headache, dizziness and nausea in 20 minutes; collapse, unconsciousness, possibly death in 2 hours.
0.32	Headache and dizziness in 5 to 10 minutes; unconsciousness and danger of death in 30 minutes.
0.64	Headache and dizziness in 1 to 2 minutes; unconsciousness and danger of death in 10 to 15 minutes.
1.28	Immediate effect; unconsciousness and danger of death in 1 to 3 minutes.

Rocky Mountain M. J., April, 1943

the doctor has on a gown which is laundry clean but not sterile.

After the delivery, the patient is turned on her side toward the foot of the bed, the eight sheets of paper and the top towel are unpinned and rolled toward her. She is then turned back toward the head of the bed, and other pins removed and the papers and towel discarded. She is then lifted into proper position of the bed, being on top of the first towel and the six sheets of newspapers.—J. E. GARRISON, M.D., in *J. Med. Assoc. Ala.*, Feb. 1943.

If the physician feels a weakness in his aseptic technic, he has a powerful antiseptic in sulfanilamide or sulfathiazole powder. If necessary to pack a uterus, he can, in a moment, incorporate one of these substances into the folds of his pack.

Procaine is a safe, effective anesthetic for local infiltration into the perineum or for blocking off the nerves.—E. S. PALMERTON, M.D., in *Minn. Med.*, Feb. 1943.

◆

The Diabetic Child

The child who exercises more while on a diabetic diet and insulin therapy should be compensated for by an increase in his food. The mother is advised to give additional measured quantities of raw fruits and vegetables during periods of increased physical activity, rather than to change the insulin dosage.

An emotional upset will interfere with diabetic regulation. The immediate effect is a rise in blood sugar with resultant glycosuria. The patient's appetite will usually be affected; vomiting and diarrhea may follow. The psychological adjustment of the child and family is difficult but necessary. Diabetes cannot be well controlled unless the child can be kept relatively stable emotionally.

Adequate treatment is important. The diabetic child whose diabetes is not well controlled by good management, has a narrow margin of safety and is difficult to handle both physically and psychologically.

The addition of vitamin B complex to the diet does not reduce the amount of insulin needed.—R. L. JACKSON, M.D. in *Bull. Linn Co. M. Soc.*, Apr. 1943.

◆

Treatment of Hydrocephalus

Hydrocephalus in young babies usually has been considered a hopeless condition. Dandy has relieved the condition in a number of patients by cauterizing the choroid plexus. Hyndman found that only one-fifth of the plexus could be cauterized and that apparently as good results could be obtained by pulling out the plexus, which tore the membranes and permitted free communication between the ventricles and the space surrounding the cerebral hemispheres. — P. C. JEANS, M.D. in *Bull. Linn Co. Medical Soc.*, Apr. 1943.

◆

Bile Salts for Constipation

The average patient of middle age who is constipated suffers from biliary constipation. The symptoms are those of gall bladder indigestion and spastic colon, including belching, flatulence, abdominal distention and fullness, and intolerance to greasy foods.

Treatment: Bile salts are given, as Bilron capsules, (Lilly) one with each meal. This dosage is increased or reduced until the patient has best results. I have also used Desicol (Parke, Davis) and Ketochol (Searle). Irritating foods such as onions, cabbage, cauliflower, radishes, peppers, fried and greasy foods must not be eaten. Rest, relaxation, vitamin B complex and sedatives are other measures of balanced treatment.—H. GAUSS, M.D. in *Am. J. Dig. Dis.*, Apr. 1943.

◆

Obesity and Breathlessness

Obesity itself can produce shortness of breath. The stout person cannot breathe as freely as the lean. The diaphragm does not descend as readily and when the adiposity particularly involves the abdominal region, the diaphragm is apt to be held at a high level and the vital capacity of the lung is diminished. Impairment of the pulmonary ventilation may be followed by chronic bronchitis and emphysema. — GEORGE KELEMEN, M.D. in *Laryngoscope*, May 1943.

(Many of these obese patients are suspected of having heart disease because they become dyspneic on exertion and because their hearts are wider than normal. After reduction to normal weight, the diaphragm lowers and the heart narrows, due to lack of pressure from below.—Ed.)

◆

Life After Nephrectomy

A patient, when told that removal of one kidney is necessary, nearly always asks: First, "Can I live with only one kidney?" Secondly, "Will it shorten my life?" Third, "Will the removal of one kidney handicap me and limit my work and activities?" Life is not shortened; patients live for a long time after a

nephrectomy. The patient's work and activities are limited to the extent that certain precautions must be taken.

A series of 156 nephrectomy patients were examined with these findings: Some patients were alive and well 25 years after the operation (the kidney was removed from patients varying in age from ten months to 72 years); three-fourths of these patients had a normal urination. Pain in the remaining kidney does not occur commonly.—H. L. KRETSCHMER, M.D., *J.A.M.A.*, Feb. 1943.

◆

Avoidance of Vaccination Reactions

To avoid the high fever occasionally encountered after the subcutaneous injection of vaccines, a number of authors have reported on the injection of the vaccine into the upper layers of the skin (intradermal injection).

Intradermal injection permits the reaction of the patient to the vaccine to be seen and measured. Urschel* reports excellent results in treating a series of chronic undulant fever patients by intradermal injections of stock brucella vaccine. The stock vaccine is diluted 1 to 5 with sterile water or saline and the initial dose is 0.1 cc. Weekly injections are given in gradually increasing doses, as the patient tolerates it.

Because of several reports in the literature concerning the intradermal and divided dose, use of scarlet fever vaccine (Dick) to avoid the fever, malaise, and occasional prostration, following such vaccine prophylactically, Dr. Dick was queried concerning its use in other strengths than prescribed. He did not feel that *there was any reason for* changing the method.

◆

◆

Newer Knowledge Concerning Vaccination

Ninety percent of those previously vaccinated for smallpox should have a "take" if revaccination is properly performed. *Therefore, failure to obtain successful takes in patients who have been vaccinated previously often indicates poor technic.* [1]

The older a patient is at the time of his first vaccination, the less likely he is to have a good result, apparently because he is less able to produce antibodies; this is another reason for vaccination in childhood.

Scratch method: After cleaning the arm with alcohol and allowing it to dry, a drop of vaccine is applied to the deltoid surface. Two linear scratches, three-eighths of an inch in length, and one-eighth of an inch apart, are made through the vaccine with the sharp point of a Hagedorn needle. The vaccine is then pressed into the scratches by making an upward stroke with the flat surface of the needle pressed against the arm. No blood should be drawn. The vaccine is allowed to dry before clothing touches it. Four vaccinations can be done per tube.

Intradermal method: The vaccine from one tube is drawn into a syringe, normal saline added sufficient to bring it to the 10 minim mark, and thorough mixing carried out. Two minims of the saline-vaccine mixture are injected into the skin itself (thus raising a wheal). Five cases can be vaccinated with material from each tube.[1] If care is used, results are the same with either method.

There is little difference in the size of scar produced in primary takes with various kinds of vaccines and methods of vaccination[2].

The appearance of a wheal, immediately after wiping off the vaccine virus, indicates that a successful take will be obtained[3], with the usual multiple puncture method.

The appearance of a vesicle following intradermal vaccination indicates that complete immunity will be obtained.[4]

The consensus seems to be that intradermal vaccination is "fool proof", i.e. errors of technic are avoided because one can see that a wheal is produced and that the vaccine has been placed in the skin itself. References in the older literature[5] also attest to its value.

---

*Urschel, Dan: Brucellosis, *J. Ind. S. M. A.*, p. 294, (June) 1943.

1. McEwan, Tom: A Contrast in Methods of Vaccination. *Glasgow Med. J.* 134:163 (Nov.) 1940.

2. Ellis, R. and Boynton, Ruth: Smallpox Vaccination. *Pub. Health Reports*, 54:1012 (June 9) 1939.

3. Cohen, R.: An Immediate Prognostic Sign of a Smallpox "Take." *Ky. M. J.*, 38:40 (Jan.) 1940.

4. Henderson, R. G. and McClean, D.: Immunity with Suspension of Vaccinia. *J. Hygiene*, 39:680 (Nov.) 1939.

5. Wright, L. T.: Intradermal Vaccination. *J. A. M. A.*, 71:654 (Aug. 24) 1918. Gettinger, J. H.: Intracutaneous Vaccination. *Med. J. & Rec.*, 70:115 (Aug. 6) 1924. Twyman, T.: Intradermic Vaccination. *J. Missouri S. M. A.*, 19:353 (Aug.) 1922.

Symptoms of Colonic Cancer

The symptoms of right colonic cancer are: (1) abdominal pain, (2) weight loss, (3) *indigestion* and (4) *anemia*, which is often severe.

Cancer of the left half of the colon is indicated by *constipation* in 90 percent of cases. Abdominal pain and melena come next in frequency.

Slight *fever* may occur with any type of malignant growth.

Rectal growths cause constipation and melena. The growth could be felt in almost every case by simple digital examination. Even a "high" tumor in the rectum can be palpated by examining the patient in the squatting position, while he is straining.

Pain was the first symptom noted in many cases. "The change of bowel habit" was found in the majority of patients.

The use of the proctoscope and the barium enema will permit the correct diagnosis to be made in 98 percent of patients. *Colonic malignacy metastasizes late, so the prognosis for cure is good if the diagnosis is made in time.*—A. Trasoff, M.D. in *Am. J. Dig. Dis.*, Apr. 1943.

Proctoscopic Signs

Edema, as viewed through the sigmoidoscope, usually indicates an inflammatory lesion above that point, such as an inflamed diverticula. Edema rarely signifies the presence of a malignant lesion. Occasionally, one may look directly into the sac of a diverticulum or one may suspect its presence by marked angulation of the bowel or by finding sacculations, shallow pounches which extend partially or wholly around the bowel wall. — L. A. Buie, M.D. in *J.A.M.A.*, Apr. 3, 1943.

Smallpox Vaccine Treatment of Herpes

Herpes zoster is the result of an inflammation affecting the ganglia, posterior roots, spinal nerves, sensory extra-medullary ganglia, or cranial nerves. Vesicles appear along the distribution of the nerve involved. Neuralgic pain is often distressing.

Causes: Virus infection, syphilis, nerve ganglia poisoning or irritation.

Treatment: (1) Injections of pituitary extract, (2) x-ray treatments, (3) local use of ointments and (4) injections of foreign protein.

The use of smallpox vaccine early in the course of herpes zoster is effective in relieving both the subjective and objective phases. The vaccination is repeated at intervals of from 2 to 10 days. Good results have been obtained regardless of the severity of the disease.

Davis (*J.A.M.A.* May 25, 1940) has reported good results with smallpox vaccinations for treatment of herpes simplex.—Walter I. Lillie, M.D. in *N.Y.S. J.M.*, May 1, 1943.

Where Cancer Strikes!

The following table based upon an average year's statistics of the United States Bureau of the Census indicates the organs in which cancer is most likely to occur:

	Number	Percent
Lip	764	0.56
Tongue	1,097	0.81
Mouth	620	0.46
Jaw	950	0.70
Pharynx	912	0.68
Esophagus	2,386	1.77
Stomach, duodenum	27,241	20.31
Intestine	15,634	11.45
Rectum, anus	7,325	5.47
Liver	10,425	7.77
Pancreas	4,440	3.31
Lungs and other respiratory organs	6,840	5.10
Uterus	16,280	12.14
Breast	13,708	10.22
Male genito-urinary	12,356	9.21
Skin	3,404	2.53
Kidneys	2,075	1.54
Bladder	4,653	3.46
Brain	1,284	0.95
Bones	1,976	1.47

It is generally agreed that by preventive measures and by early treatment it is possible to reduce by one-third to one-half the deaths from cancer of the lip, tongue, mouth, intestine, rectum, anus, uterus, breast, skin and bladder. If this desired end were brought about 20 to 30 thousand lives would be saved in this country each year.—*Bull. Women's Field Army (Iowa)*, April. 1943.

Thiourea for Hyperthyroidism

The administration of thiourea or thiouracil results in control of all symptoms of hyperthyroidism and a slight increase in size of the gland, as long as the drug is taken. These compounds inhibit the endocrine function of the thyroid gland. One to two Gm. of thiourea or 0.2 to 1 Gm. of thiouracil is given daily.*—E. B. Astwood, M.D. in *J.A.M.A.*, May 8, 1943.

*The thiouracil was supplied by the American Cyanamid Co., Stamford, Conn., and Lederle Laboratories, Pearl River, N. Y.

Sulfonamide Renal Obstruction

Prevention: Renal obstruction, due to crystal formation during the administration of sulfathiazole, sulfadiazine or sulfapyridine, may be prevented by the addition of 10 to 20 Gm. of sodium bicarbonate to each day's dose. Sulfonamide crystals are much more soluble in alkaline urine (the pH should be kept at 7.5 or higher).

Treatment: If crystals have blocked the kidney pelvis or ureter, pass a ureteral catheter through the ureter to the kidney pelvis and lavage with alkaline bicarbonate or carbonate solutions, as they will dissolve the drug crystals more readily than will saline solution.—C. L. Fox, Jr., M.D. in *J.A.M.A.*, April 3, 1943.

✦

Meaningless Medical Terms

The housewife, labeling her jam will write strawberry, cherry, and the like upon her labels. If a physician suggested that she should label the pots X,Y and Z and learn that Z stood for marmalade, she would laugh him to scorn. Yet doctors naming the scurvy vitamin, the rickets vitamin and the pellagra vitamin, called them by the letters of the alphabet.

When we name a medical entity, we could choose a word which aptly describes it and does not have to be learned like a code. When a bone is shattered, the surgeon calls it a comminuted fracture. How delightful it would be if he called it a shatter fracture. *An additional name does not mean additional knowledge.*

Consider the sulfonamides: Most of us confine ourselves to four different kinds (1) those that make one blue, (2) more powerful ones that make one sick, (3) still more powerful ones that do not make one sick or blue but are much harder to get and (4) those that stay longer in our guts. These are correctlv named sulfanilamide, sulfapyridine, sulfadiazine and sulfaguanidine. Yet for sulfanilamide alone there are 42 different names, which effectively disguise the real drug.—R. A. J. Asher, M.D., in *Lancet*, Feb. 13, 1943.

✦

Clinical Instinct in Diagnosis

The use of vision is one of the best aids to diagnosis. Certain signs signify particular diseases: the petechiae of acute infective endocarditis, and the Osler's nodes that characterize the subacute forms of the disease; the characteristic, periodic, Pel-Ebstein type of fever in lymphadenoma; the few rose-pink papules which constitute the distinctive eruption of typhoid; the collapsed eyeball of diabetic coma; the telangiectasia of the face ("spider-burst") in coarse hepatic cirrhosis; the rigid, expressionless, greasy face in Parkinsonism.—S. Watson Smith, M.D., in *Lancet* (Eng.), Jan. 30, 1943.

✦

Care of Minor Foot Troubles

The prevention and treatment of common, minor disorders of the feet may be summarized:

I. Infections, fungous and pyodermic:
  A. "Athlete's foot" or ringworm does not cause every infection of the foot. *The more severe the foot infection, the milder the local treatment should be.*
  B. Acute infections:
    1. Rest of the part
    2. Hot, wet dressings (potassium permanganate 1:6000 or saturated boric acid solution)
    3. Pus forming infections will subside; staphylococcic infections may require incision; streptococcic infections may require sulfatherapy.
    4. Fungous infections, acute and secondarily infected, will be somewhat improved with above treatment.
  C. Chronic infections, usually fungous :
    1. Keratolytics and fungicides: salicylic acid, benzoic acid, sulphur, ammoniated mercury, gentian violet for local application.
    2. X-ray therapy for resistant, eczematous forms.
  D. Prevention of recurrence by local cleanliness and dryness, and use of antiseptic absorbent powders.

II. Corns, callosities, ingrown toenails
  A. Prevention by removal of friction and pressure
  B. Caustics and keratolytics; Bichloracetic acid 25 percent; salicylic acid in collodion or plaster; Excision, paring, desiccation.

III. Plantar warts
  A. Removal of friction and pressure; surgical removal with scalpel or electrodesiccation; x-ray therapy.

IV. Hyperidrosis ("sweaty feet")
  A. Cleanliness
  B. Aluminum chloride, 25 percent solution in water; powders.

H. Witten, M.D. in *U.S. Naval M.B.*

THUMBNAIL THERAPEUTICS

Sulfur Ointments for Burns

• A number of badly burned sailors were treated with U.S.P. sulfur ointment. The dressings were left on from 10 to 16 days. Healing was remarkably fast and changes of dressings were performed almost painlessly.—C. WASSELL, M.D., in *Hawaii Med. J.*, Feb., 1943.

Potassium Iodide in Asthma

• Potassium iodide tends to lessen the onset of attacks of asthma. Ten (10) grains (0.65 Gm.) may be given three times daily, alone or in combination with other medications.—*Prescriber* (Eng.), Jan., 193.

Pituitary Extract in Obesity

• Pituitary extract (posterior lobe extract) is of value in the treatment of obesity. The dose is increased to a point just short of producing intestinal cramps or nausea. It is given hypodermically once or twice weekly, beginning with 0.1 cc. (diluted with sterile water).—J. H. HUTTON, M.D., in *Miss. Vall. M. J.*, Apr. 1943.

Prostigmin for Delayed Menstruation

• The subcutaneous injection of 1 mg. of prostigmin methylsulfate daily, for 3 days, is effective in bringing on menstruation if pregnancy, endocrine dysfunction, organic pelvic condition or chronic menstrual irregularity is not present. It may be considered as an early test of pregnancy.—H. CARAPETYAN, M.D. in *J.A.M.A.*, May 8, 1943.

The Tired, Weak, Depressed Patient

• The patient who is exhausted, "tired in the morning," feels "poisoned through his whole system," depressed and weak, is often a victim of food allergy. He should have skin tests to determine which foods he is sensitive to. When the foods are eliminated, he becomes brighter and stronger within a few days.—J. A. TURNBULL, M.D. in *Am. J. Dig. Dis.*, June 1943.

Sulfathiazole for Skin Infections

• Sulfathiazole is useful in the treatment of acute furunculosis, impetigo contagiosa, pyogenic lymphagnitis, acute infectious eczematoid dermatitis, blepharitis marginalis and erythema multiforme. It is beneficial in sycosis vulgaris and pustular acne vulgaris.—G. WILLIAMS, M.D. *in South, Med. J.*, Mar. 1943.

Preventing Reactions to Immunizations

• Pain and sleeplessness following the injection of vaccines can be avoided by giving the child a small dose of sedative, preceding the injection and repeating it at bed time. Seconal in doses of ¼ to ¾ gr. is very rapid acting and effective. — H. F. DIETRICH, M.D. in *Anesth. & Anal.*, Jan-Feb., 1943.

Stilbestrol in Senile Vaginitis

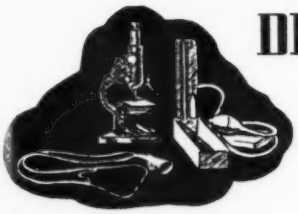
• The oral or intramuscular administration of stilbestrol relieves the symptoms of senile vaginitis (pruritis, vaginal discharge). One mg. is given three times daily until improvement is noted, then a maintenance dose of ½ to 1 mg. is given daily.—C. COLLINS, M.D. in *Tri-State Med. J.*, Jan. 1943.

Progressive Muscular Dystrophy

• We have used every method of treatment yet advised for progressive muscular dystrophy. The only one that seems effective is a combination of wheat germ oil and liver extract.—P. C. JEANS, M.D. in *Bull. Linn County Med. Soc.*, April 1943.

Eustachian Tube in Deafness

• Chronic deafness is very often caused by disease of the eustachian tube. The nasopharynx should be examined with the mirror (posterior rhinoscopy) or with a nasopharyngoscope. If lymphoid tissue blocks the opening of the tube, it should be removed, with radium, adenotome or cautery. Edema of the tube due to allergy is a frequently overlooked cause. Inflation of the eustachian tube often relieves catarrhal deafness.



DIAGNOSTIC POINTERS

Chronic Sore Throat or Hoarseness

• Chronic sore throat or horseness should make the clinician look for pulmonary tuberculosis. The patient may look apparently well, the pulmonary and systemic signs being masked by the laryngeal symptoms.—J. C. DONNELLY, M.D. in *J.A.M.A.*, Oct. 31, 1942.

Lesions Simulating Tuberculosis

• Patients may give a history of cough, loss of weight, hemoptysis and night sweats, and yet not have pulmonary tuberculosis. The differential diagnosis is made (1) by asking for any possible contact with tuberculosis and (2) x-ray study. The x-ray findings rule out tuberculosis in 99 percent of such cases. The true diagnoses are, in order of frequency, bronchiectasis, asthma, pulmonary cancer, silicosis, cardiac hypertrophy, bronchitis, lung abscess, myocarditis and endocarditis, aortic aneurysm, Hodgkin's disease, mitral insufficiency, pulmonary syphilis and rare causes.—OTTO C. SCHLACK, M.D., *in Ill. Med. J.* Apr. 1943.

Colonic Pain

• Spasm of the colon gives rise to a continuous, wearing ache, not rhythmical or griping, and lacking the sharper quality and soreness of visceral or peritoneal inflammation. Rarely, colonic spasm may come on in acute attacks simulating gallstone or kidney stone colic.—JOHN RYLE, M.D. in *Med. World (Lond.)*, Mar. 5, 1943.

Vitamin C and Wound Healing

• Spontaneous breakdown of a wound may be due to vitamin C deficiency. When a wound breaks down, it is usually soft and friable, with dark, purplish discoloration, thick and necrotic edges, and exudate but no pus. Trauma during operation, use of too large sutures or too much suture material and failure to stop all bleeding, will also result in wound breaking down. — E. F. GOOEL, M.D. in *West. J. Surg., Gyn. & Ob.*, May 1943.

Chronic Cough and "Pneumonia" in Children

• The infant or child with chronic cough, which comes in attacks, is probably allergic. Bronchitis and fever may be associated with the attacks, and a diagnosis of pneumonia is made. The attack lasts only one or two days, and is relieved by ephedrine and epinephrine. —LEO H. CRIEP, M.D. in *Penn. Med. J.*, May 1943.

Discharge After the Menopause

• Every menopause patient who complains of discharge, which persists for more than 2 weeks during treatment or which recurs after treatment, should be curetted against the possibility of a high cervical cancer or cancer of the uterine body.—W. F. T. HAULTAIN, M.D. in *Clin. J.* (*Eng.*), Dec. 1942.

The Diagnosis of Diphtheria

• *The diagnosis of diphtheria is a clinical problem* and should rest primarily with the physician. Often, the doctor attempts to place the responsibility on the laboratory and expects a positive or negative diagnosis within fifteen minutes.

The bacteriologic evidence is *confirmatory only*, and should be arrived at only after several days of careful cultural and microscopic study. Direct smears are of little value in the diagnosis of diphtheria, since they rarely demonstrate the presence of Corynebacterium diphtheria (that may indicate that an acute throat infection is not diphtheria but rather Vincent's angina).

Rule: If diphtheria is suspected, send two swabs to the laboratory, one for the direct smear with methylene blue, the other for rubbing the surface of a Loffler's blood agar medium and culturing.—I. G. SCHAUB. B.A. in *"Methods for Diagnostic Bacteriology"* (C. V. Mosby Co. 1943).

• "If a general practitioner knows three things about disease that are really true and important, he probably is a good diagnostician; he might still be good if he knows five things and is an exceptional man, but if he knows too many things, he is likely to become lost in the fog of the minutiae." — A. J. OCHSMER, M.D.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

There is something to be said for remaining within a room of one's own and allowing one's book to do the talking.—EDWARD WEEKS

◆

MANUAL OF DERMATOLOGY

MANUAL OF DERMATOLOGY; Military Medical Manuals. *Issued under the Auspices of the Committee on Medicine of the Division of Medical Sciences of the National Research Council by Donald M. Pillsbury, M.D., Marion B. Sulzberger, M.D., and Clarence S. Livingood, M.D. 421 pages; 109 illustrations. Philadelphia and London:* W. B. *Saunders & Co. 1942. Price, $2.00.*

Saunders have published a series of manuals on medical and surgical diseases as they may be encountered in military practise. They are well bound, printed in clear, large type and so durable as to be used under trying conditions.

Inasmuch as skin diseases and syphilis may account for 20 to 25 percent of dispensary calls by army personnel, it behooves the physician to know at least the common skin disorders.

Eighty, full page, illustrations show eruptions on commonly involved sites. These photographs are large and sharp enough so that the lesion is readily recognized, as contrasted to the small illustrations usually found in dermatology texts. Pointers on diagnosis and treatment accompany each illustration.

The physician in general practice will find this small book very handy for it contains many helpful hints. The diagnosis of skin lesions by their location is given extended discussion. At the end of the discussion of each important skin disease, the few important factors are placed in black type and enclosed by ruling.

◆

INDIGESTION

Rehfuss

INDIGESTION: Its Diagnosis and Management. *By Martin E. Rehfuss, M.D., Professor of Clinical Medicine; and Sutherland M. Prevost, Lecturer in Therapeutics, Jefferson Medical College, Philadelphia, Pa. 556 pages with 63 illustrations. Philadelphia and London:* W. B. *Saunders Company. 1943. Price, $7.00.*

This book is written for the general practitioner. It will acquaint the reader with new advances in the field of gastric and intestinal diseases. Its material is so clearly written that it may be read by anyone who treats such diseases.

The authors go into detail on the passing of gastric tube. Emphasis is laid on the appearance of pus in the fasting stomach, which may indicate severe sinus infection or tuberculosis. A great amount of material is given in detail on the methods of x-ray of the stomach and intestinal tract.

Allergy is a cause of indigestion and is covered in a separate chapter; an indication of the author's broad-mindedness. The section on treatment is complete. This book is very much worthwhile, interesting, and immediately usable.

◆

CHANGES IN THE KNEE JOINT

Bennet, Waine, Bauer

CHANGES IN THE KNEE JOINT AT VARIOUS AGES, With Particular Reference to the Nature and Development of Degenerative Joint Disease. *By Granville A Bennett, M.D., Associate Professor of Pathology, Harvard Medical School; Hana Waine, M.D., Research Fellow in Medicine Harvard Medical School and Walter Bauer, M.D., Associate Professor in Medicine, Harvard Medical School; Physician to the Massachusetts General Hospital; Director, Lovett Memorial Foundation for the Study of Crippling Diseases. New York: The Commonwealth Fund. 1942. Price, $2.50.*

One of the conclusions of the authors needs wider publicity. Following a study of normal knee joints at various ages, "It soon became apparent that *all* the joints obtained from individuals beyond the second decade of life exhibited alterations similar to those observed in so called hypertrophic arthritis or degenerative joint disease" (old age arthritis). "We are led to conclude that articulations remain normal for a very short time only following complete maturation."

In other words, every person past 20 years of age has pathologic changes in the knee joint; these become progressively more marked as the person becomes older. What has been considered clinically as chronic, non-infectious, arthritis of older persons is thus a condition to be found in all persons; the pathologic process beginning long before symptoms appear. In the majority of persons with this degeneration of the hyaline cartilage, there are no symptoms.

Hyaline cartilage has few cells, a limited blood supply, and very little ability to repair itself. The authors do not believe in any of the theories put forth to explain aging of joints, but point the way to further research which may explain it.

◆

THE MARCH OF MEDICINE

THE MARCH OF MEDICINE: Lectures to the Laity, 1942. *New York: Morningside Heights; Columbia University Press, 1943. Price $2.50.*

This is an excellent volume for the physician to read of an evening when he wants to brighten up his vision of his profession.

These six lectures, as delivered at the New York Academy of Medicine, are well worth reading, and letting interested laymen, for whom they are directed, peruse.

The respective topics are: Tuberculosis, the Known and the Unknown; The Brain and the Mind; The Freudian Epoch; Genius, Giftedness and Growth; The History of the B-Vitamins and The Newer Knowledge of Nutrition. The speakers were all men of national repute. Unlike many addresses intended for delivery to the public, these have been made interesting as well as informative. Brill's remarks on Freud should be read by every physician interested in the field of pyschoanalysis.